







Comparison of Psychological and Pharmacological Premedication by Assessing Preoperative Anxiety Level in Patients Scheduled for Elective Operation

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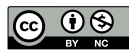
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ABSTRACT

Objective: This study aimed to compare the effectiveness of preoperative information and sedative premedication for decreasing preoperative anxiety of patients scheduled for elective surgery.

Methods: ASAII-II, aged 20–65 years, 90 patients who were scheduled for surgery in a University Hospital, Gynaecology and Obstetrics Service were included in the study. Anxiety levels of all patients were measured with the STAI questionnaire one day before the operation. The patients were divided into three groups. After the questionnaire, detailed private information was given to a group of patients (GroupP) by the anaesthesiologist who will perform the anaesthesia. Oral diazepam was given to a group of patients (GroupPh) before they came to the operating room. Routine preoperative visits were made to the patients in the control group (GroupC) after applying the questionnaire. After they were brought to the operating room, the STAI questionnaire was applied to all patients again before the surgery.

Results: Median State anxiety was 48 (23-70), median Trait anxiety was 44 (31-67) and median VAS was 50 (0-100) in all patients. After preoperative information, the state anxiety was lower significantly in GroupP ($p<0.001$). After diazepam, the state anxiety was lower significantly in Group Ph ($p<0.001$). The median state anxiety of GroupP and GroupPh that were assessed just before the surgery was lower than GroupC ($p=0.023$, $p=0.007$). There was no significant difference between the state anxiety of GroupP and GroupPh after the intervention ($p=0.750$).

Conclusion: It has been shown that effective use of the time allocated to patients and informing by the anaesthesiologist who will perform the anaesthesia in reducing preoperative anxiety is as effective as drug-induced premedication.

INTRODUCTION

Anxiety is an unpleasant condition that shows itself in the form of restlessness and tension that may be associated with hemodynamic indicators such as hypertension and tachycardia resulting from sympathetic, parasympathetic, and endocrine stimulation.^[1] Awaiting surgery is a stressful situation for patients.^[2] Although such anxiety seen in many patients undergoing elective surgery is considered an expected response, it is still an important problem for the majority of patients. The advancement of surgical techniques and the fact that the perioperative period has

become safer do not reduce the anxiety level of patients.^[3]

Anxiety affects vital signs such as pulse rate and blood pressure and increases sweating. It also has the potential to have an impact on patients' responses to anesthesia and analgesia,^[4] induction of anesthesia, and recovery.^[5] Preoperative anxiety is associated with increased postoperative pain, the need for analgesics, and extended hospitalization.^[3] High-level anxiety may affect a patient's immune system and delay wound healing.^[4] Considering these factors, it is important to evaluate patients in the preoperative period for anxiety.

The communication between the patients and the anesthesiologist occurs during the visit 1 day before the surgery.^[6] This visit is the psychological part of preoperative medication. In recent years, the increased emphasis on day surgeries has resulted in anesthesiologists not having enough time to conduct extensive preoperative interviews with patients. This may also lead to a failure to provide patients with the necessary information about surgery and anesthesia.^[3] On the other hand, the pharmacological part of preoperative preparation is made using various medications. Diazepam, a benzodiazepine, produces anxiolysis, sedation, and amnesia, depending on the dose. Diazepam has long been orally administered for preoperative sedation. Adults are given doses of 5–15 mg of diazepam for preoperative sedation.^[7,8]

The “State-Trait Anxiety Inventory (STAI)” is the most commonly used technique among the subjective self-measurement tests to measure the level of anxiety in patients.^[9] This inventory was developed by Spielberger.^[10] Moreover, the Visual Analogue Scale (VAS) is an appropriate technique for measuring anxiety, and it is easy to apply.^[5]

The aim of this study is to compare the briefing of the anesthesiologist who will perform anesthesia versus premedication with oral diazepam regarding their effect on the anxiety levels of patients who will undergo elective operation.

MATERIALS AND METHODS

Following the approval of the School of Medicine Non-interventional Clinical Trials Ethics Committee (decision number 2012/43-01 dated December 27, 2012), a total of 90 patients aged 20 to 65 who were classified as ASA I-II and scheduled for operation at the Gynecology and Obstetrics Department were included in the study.

Cancer, cerebral damage, psychiatric disorder, use of psychotropic medication, and mental retardation were exclusion criteria for our study population. Furthermore, illiterate patients and those who did not answer one or more questions on STAI were excluded from the study.

Study data were collected using the STAI I-II (State Anxiety Inventory [STAI-I], Trait Anxiety Inventory [STAI-II]) and VAS.

For VAS, a ruler consisting of a horizontal line marked 0 at the beginning and 100 at the end was prepared. The patients were asked to mark a place between 0 and 100 that best suited their anxiety level with an “x”.

The questionnaire form was composed of three parts: Part 1 included demographic information, Part 2 included STAI-I and STAI-II, and Part 3 included a ruler for VAS scoring.

Patients who were eligible to be included in the study were determined once the next day’s surgery list was issued, and they were divided into 3 groups through block randomization: the control group (Group C, n=30); the

psychological premedication group (Group P, n=30), and pharmacological premedication group (Group PH, n=30).

The pre-anesthetic assessment of the patients was performed on the day before the surgery, as in their daily routine practice. In daily routine practice, anesthesiology residents evaluate a large number of patients in a short time and consult the relevant anesthesiologist. Besides the restricted time allocated for the assessment of one patient, these anesthesiology residents can perform anesthesia only for some of the patients they have evaluated.

After the routine pre-anesthetic assessment was completed, all study subjects were informed about the study by an investigator who had the knowledge of the fact that a questionnaire would be carried out but did not know which group the patients belonged to. Written informed consent was obtained from each patient and all patients were asked to fill out a three-part questionnaire (including State Anxiety-I, Trait Anxiety, and VAS-I).

After the conduction of the questionnaires, the patients in Group P were specifically informed by the anesthesiologist that would perform anesthesia on the surgery day. The briefing included information about the procedures to be carried out before getting to the operating room (preparation for surgery, how to transfer to the operating room, etc.) and the procedures to be applied to the patient when they arrived in the operating room (operating room environment, monitoring, etc.). The patients were asked about the issues that worried them about anesthesia applications and that they wanted to get information about, and they were given information about these issues. Questions asked by the patients were carefully answered. However, unnecessary details were avoided during the briefing. It was especially emphasized to the patients in Group P that the anesthesiologist who individually informed them would be present during anesthesia application to the patient.

No additional briefing procedure was conducted for the patients in Group PH. Patients were orally given diazepam (5 mg for patients weighing up to 70 kg, 7.5 mg for patients weighing more than 70 kg) approximately 45–60 min before they were brought to the operating room on the surgery day.

No additional briefing procedure was conducted for the patients in Group C.

When patients came to the operating room on the surgery day, an investigator who did not know which patient belonged to which group administered the STAI-I and VAS (State Anxiety-2, VAS-2) to all patients while they were in the preoperative waiting room. Before this questionnaire only the patients in Group P were greeted in the operating waiting room by the anesthesiologist, who individually informed them the day before.

The state anxiety score and the VAS score measured 1 day before the operation were recorded as “State Anxiety-1” and “VAS-1,” respectively, while the state anxiety score and the VAS score were recorded as measured in the waiting room on the day of surgery and were called

“State Anxiety-2” and “VAS-2,” respectively.

The manual scoring method was used in the calculation of the STAI score.

The scores obtained from both scales theoretically vary between 20 and 80. Greater scores show higher anxiety levels, while lower scores show low anxiety levels.

Power Analysis

In previous studies, Tasdemir et al.^[11] measured the anxiety level using STAI in the preoperative period in patients undergoing surgery and determined the anxiety level determined by STAI as an average score of 40.6 ± 11.23 in patients who did not receive any information or sedative anxiolytic medication. Using this data, the lowest number of cases in the groups in which a 5% decrease in STAI level could be determined with an alpha error (p value) of 0.05 and a working power of 99% was determined as 29. It was planned to include 30 patients in all groups in our study.

Statistical Analysis

The Statistical Package for Social Science 15.0 was used for the analysis of the study data. Continuous variables and their subgroups were represented as median, minimum, and maximum values. Frequency variables were expressed in frequencies and percentages. The Kolmogorov-Smirnov test was used to test compliance with the normal distribution. On the other hand, in the analysis of continuous, non-normally distributed variables, the Bonferonni-corrected Kruskal-Wallis test was used to compare three groups, and the Mann-Whitney U test was used for the comparison of two groups. The Wilcoxon test was used for intra-group comparisons. The Chi-square test was

used in the analysis of the variables determined by counting. $p < 0.05$ was considered statistically significant.

RESULTS

This study included 90 female patients aged from 20 to 65 years of age (median, 45.5). There was no significant difference between the groups regarding patients' educational status, occupation, and marital status ($p=0.066$, $p=0.581$, and $p=0.601$, respectively) (Table 1).

There was no statistically significant association between patients' age, educational status, occupational group, marital status, previous history of anesthesia, and the scores of State Anxiety-1, Trait Anxiety, and VAS-1 ($p > 0.05$) (Table 2).

Considering all patients from the three groups, the median State Anxiety-1 score was calculated as 48 (23–70), the median Trait Anxiety score as 44 (31–67), and the median VAS-1 score as 50 (0–100). No statistically significant difference was observed between the groups and the scores obtained from State Anxiety-1, Trait Anxiety, and VAS-1 ($p > 0.05$) (Table 3).

When the patients in Group C were compared in terms of their State Anxiety-1 and State Anxiety-2 scores, it was observed that the State Anxiety-2 scores were numerically higher, but the difference was not statistically significant ($p=0.121$). Furthermore, there was no statistically significant difference between VAS-1 and VAS-2 scores ($p=0.987$) (Table 3).

It was revealed when the patients in Group P were compared in terms of their State Anxiety-1 and State Anx-

Table 1. Sociodemographic characteristics of patients

| | GroupK n=30 | GroupP n=30 | GroupF n=30 | Total n=90 |
|---------------------------|----------------|----------------|----------------|---------------|
| AGE median (min-max) | 38 (25-60) | 42.5 (20-65) | 43.5 (24-65) | 42.5 (20-65) |
| | n (%) | n (%) | n (%) | n (%) |
| Educational Status | | | | |
| Illiterate | 1 (1.1) | 1 (1.1) | 1 (1.1) | 3 (3.3) |
| Secondary school graduate | 4 (4.4) | 3 (3.3) | 6 (6.7) | 13 (14.4) |
| High school graduate | 9 (10) | 11 (12.2) | 7 (7.8) | 27 (30) |
| University graduate | 7 (7.8) | 8 (8.9) | 4 (4.4) | 19 (21.1) |
| Primary school graduate | 9 (10) | 7 (7.8) | 12 (13.3) | 28 (31) |
| Occupation | | | | |
| Homemaker | 17 (18.9) | 15 (16.7) | 19 (21.1) | 51 (56.7) |
| Government employee | 7 (7.8) | 7 (7.8) | 3 (3.3) | 17 (18.7) |
| Self-employed | 2 (2.2) | 3 (3.3) | 2 (2.2) | 7 (7.8) |
| Retiree | 2 (2.2) | 0 | 1 (1.1) | 3 (3.3) |
| Worker | 2 (2.2) | 5 (5.6) | 2 (2.2) | 12 (13.3) |
| Marital Status | | | | |
| Married | 24 (26.7) | 25 (27.8) | 23 (25.6) | 72 (80) |
| Single | 4 (4.4) | 5 (5.6) | 2 (2.2) | 11 (12.2) |
| Widowed | 2 (2.2) | 0 | 5 (5.6) | 7 (7.8) |

Table 2. Association of age groups, educational status, occupation, history of anaesthesia with State Anxiety-I, Trait Anxiety and VAS-I

| | n | State Anxiety-I Median (min-max) | Trait Anxiety Median (min-max) | VAS-I Median (min-max) |
|-------------------------------|----|-------------------------------------|-----------------------------------|---------------------------|
| Age Groups | | | | |
| 20-35 | 31 | 41 (31-67) | 40 (36-47) | 50 (10-100) |
| 35-50 | 40 | 50 (35-71) | 49 (23-64) | 50 (15-90) |
| Over 50 years of age | 19 | 42 (36-63) | 45 (36-63) | 50 (10-100) |
| Educational Status | | | | |
| Primary school graduate | 28 | 48 (35-71) | 45 (36-63) | 55 (0-90) |
| Secondary school graduate | 13 | 51 (31-64) | 48 (34-60) | 50 (10-100) |
| High school graduate | 27 | 49 (33-56) | 44 (32-60) | 50 (10-80) |
| University graduate | 19 | 49 (23-68) | 42 (31-67) | 50 (15-100) |
| Illiterate | 3 | 36 (32-37) | 55 (50-56) | 40 (40-55) |
| Occupation | | | | |
| Homemaker | 51 | 49 (31-71) | 47 (34-63) | 50 (0-100) |
| Government employee | 17 | 48 (23-68) | 40 (31-67) | 65 (15-100) |
| Self-employed | 7 | 48 (32-52) | 44 (33-51) | 50 (10-85) |
| Retiree | 3 | 45 (45-51) | 47 (43-55) | 60 (40-60) |
| Worker | 12 | 49 (33-70) | 45 (36-60) | 60 (20-80) |
| Marital Status | | | | |
| Married | 72 | 48 (23-71) | 44 (31-60) | 50 (0-100) |
| Single | 11 | 49 (35-68) | 44 (35-67) | 75 (15-100) |
| Widowed | 7 | 42 (31-66) | 43 (34-63) | 50 (40-80) |
| History of Anaesthesia | | | | |
| Yes | 26 | 48 (23-71) | 43.5 (31-67) | 50 (0-100) |
| No | 64 | 51 (32-66) | 47.5 (32-63) | 50 (20-90) |

iety-2 scores that the State Anxiety-2 scores were significantly lower ($p < 0.001$). But no statistically significant difference was observed between VAS-I and VAS-2 scores ($p = 0.269$) (Table 3).

The patients in GroupPH were compared in terms of their State Anxiety-I and State Anxiety-2 scores, and it was observed that the State Anxiety-2 scores were significantly lower ($p < 0.001$). Moreover, when the VAS-I and VAS-2 scores were compared, the VAS-2 scores were also found to be lower ($p = 0.002$) (Table 3).

On the other hand, when GroupC and GroupP were compared, there was no significant difference between the groups in patients' State Anxiety-I and VAS-I scores ($p = 0.118$ and $p = 0.810$, respectively); however, the State

Anxiety-2 scores of GroupP were lower compared to the State Anxiety-2 scores of GroupC ($p = 0.023$). Nevertheless, no statistically significant difference was observed between the two groups in their VAS-2 scores ($p = 0.851$) (Table 3).

When compared, no significant difference was found between Group C and Group PH regarding their State Anxiety-I and VAS-I scores ($p = 0.242$ and $p = 0.463$, respectively). Comparing State Anxiety-2 scores, the State Anxiety-2 scores of Group PH were significantly lower than those of GroupC ($p = 0.07$). In the comparison of VAS-2 scores, the VAS-2 scores of Group PH were numerically lower, but the difference between the groups was not statistically significant ($p = 0.110$) (Table 3).

Table 3. Distribution of Patients' State Anxiety-I, Trait Anxiety, VAS-I, State Anxiety-2, and VAS-2 Scores by Groups [median (min. and max.)]

| | State Anxiety-I Median (min-max) | Trait Anxiety Median (min-max) | VAS-I Median (min-max) | State Anxiety-2 Median (min-max) | VAS-2 Median (min-max) |
|---------|-------------------------------------|-----------------------------------|---------------------------|-------------------------------------|---------------------------|
| GroupC | 46.5 (31-68) | 44.5 (32-67) | 50 (10-100) | 48 (33-65) | 50 (20-100) |
| GroupP | 49 (35-64) ‡ | 42.5 (31-58) | 50 (0-85) | 42 (25-62) ‡ * | 50 (0-90) |
| GroupPH | 48.5 (23-71) ‡ | 48 (33-63) | 50 (0-100) ‡ | 43 (22-67) ‡ † | 42.5 (10-90) ‡ |

*: $p < 0.05$, The difference between GroupC and GroupP is significant; Mann Whitney U test; †: $p < 0.05$, The difference between GroupC and GroupPH is significant; Mann-Whitney U test; ‡: $p < 0.05$, Intra-group evaluation is significant; Wilcoxon signed-rank test.

When a comparison was made between Group P and Group PH, no statistically significant difference was observed between the groups in terms of their State Anxiety-1, VAS-1, and State Anxiety-2 scores ($p=0.830$, $p=0.548$, and $p=0.750$, respectively). In the comparison of VAS-2 scores between Group P and Group PH, the VAS-2 scores of Group PH were numerically lower, but the difference between the groups was not statistically significant ($p=156$) (Table 3).

DISCUSSION

In this study, we investigated the effect of psychological or pharmacological premedication on the state anxiety scores of female patients who would undergo elective surgery. STAI, which is used to measure preoperative anxiety, is referred to as the gold standard in the literature.^[2,5,9] STAI was first developed as a tool for measuring the anxiety level in mean healthy people, but then it was revealed to be useful in measuring anxiety in patient groups.^[9] VAS is an attractive alternative for measurement due to its ease of use.^[5,12] For this reason, we decided to employ both STAI and VAS in our study. Studies in the literature suggest that the anxiety level measured in the afternoon of the day before the operation and the anxiety level measured just before the operation should be similar.^[9,13] Therefore, in our study, to reveal the effect of psychological and pharmacological intervention on anxiety measured on the day before the operation, we measured the anxiety level for the second time just before the operation.

As a result, the State Anxiety-2 scores of the patients who received psychological or pharmacological support were found to be significantly lower as compared to the control group. We were able to indicate the positive effect of psychological or pharmacological intervention on state anxiety in the cases of elective surgery.

There are not many studies in the literature comparing the effects of psychological premedication and pharmacological premedication in reducing anxiety. Egbert et al.^[14] evaluated the psychological effects of the preoperative visit by making a comparison with 2 mg/kg intramuscular pentobarbital and demonstrated that patients who were visited by an anesthesiologist before the operation were observed to be much calmer on the day of the operation. In our study, no significant difference was found between the STAI scores of Group P and Group PH. Furthermore, psychological and pharmacological interventions were not found to be superior to one another in reducing the anxiety of the patients. In the literature, there are many studies employing patient information to reduce preoperative anxiety. Leigh et al.^[15] reported that the anxiety levels of patients who were informed about anesthesia by an anesthesiologist in the preoperative period were lower compared to the control group that did not receive such support. Again, in that study, Leigh et al.^[15] made a comparison between the booklet prepared for the patients about anesthesia and the preoperative interview performed by

the anesthesiologist and revealed that the interview was more effective in reducing anxiety. In another study, the doctor was stated as the primary source from whom the patients wish to get information.^[16] In line with this information, the point we want to emphasize regarding our study is that the anesthesiologist's attention to the patient and careful information can reduce the anxiety of the patients as much as a pharmacological agent does.

It was suggested in a study investigating the effects of informing patients before the elective operation on the psychological ability of the patients to cope with the operation that information given in various forms positively affects patients' psychological coping skills. However, the authors emphasized that the information given to the patients should be suitable for the needs of the individual.^[16] Lilja et al.^[17] concluded that there must be a fine line between providing a patient with enough information to make a decision and giving too much information that could frighten the patient and cause further harm. In our study, the patients included in the psychological premedication group (Group P) were visited by the anesthesiologist, who would perform anesthesia. The anesthesiologist provided patients with information about the procedures to be carried out before getting to the operating room (preparation for surgery, how to transfer to the operating room, etc.) and the procedures to be applied to the patient when they arrived at the operating room (operating room environment, monitoring, etc.). Questions asked by the patients were carefully answered. Unnecessary detail was avoided, and questions were answered through positive advice. It was especially emphasized that the anesthesiologist who informed the patients in this group would be ready in the operation room during the operation. We believe that the information provided by this method resulted in lower State Anxiety-2 scores in Group P patients compared to those of Group C patients. Moreover, we think that the fact that these patients got to know the anesthesiologist who would administer anesthesia in advance, that they were informed by that anesthesiologist in person, and that they were greeted by him/her in the operation waiting room on the day of the operation was effective in reducing the preoperative anxiety levels of Group P patients in our study.

However, studies on preoperative briefing did not always show a difference between those who received and did not receive preoperative information about the surgery to be performed. Such controversial results might have resulted from the differences in study designs. In a study investigating the relationship between patients' knowledge levels about diagnosis, surgery, and anesthesia and their anxiety levels, it was found that having knowledge about anesthesia did not affect patients' levels of state anxiety. In this study, while 75% of the patients correctly described the surgical procedure, only 37.5% had knowledge about the anesthetic procedure. The percentage of patients who received information about the anesthetic method to be applied was found to be low.^[6] In light of these data, as we

stated at the end of our study, the method and content of the information provided gain importance.

There are various studies in the literature about pharmacologically decreasing anxiety. In a study comparing the use of midazolam, diazepam, and placebo for premedication, no significant difference was found between diazepam and placebo in terms of their effect on decreasing the anxiety level, but the investigators employed the 'Hamilton Anxiety Test' and VAS to measure anxiety in this study.^[18] In our study, however, a significant decrease was found in both the STAI and VAS scores of GroupPH who were given diazepam as the pharmacological preparation. Moreover, when compared with Group C who were not given diazepam, the anxiety levels of the patients in Group PH were found to be lower.

It has been indicated that in studies conducted to investigate preoperative anxiety, the level of preoperative anxiety ranged from 11% to 80%, depending on the scale used.^[1,19] Most of the studies in the literature conducted to investigate preoperative anxiety employed the STAI to measure anxiety. Domar et al.^[20] reported the mean preoperative state anxiety score as 45 with the STAI. Demir et al.^[2] found the median preoperative state anxiety score to be 38 in female patients undergoing cardiac surgery. In the same study, the median trait anxiety score in women was reported to be 44. Kim et al.^[9] found the mean preoperative state anxiety score to be 45.3 and trait anxiety to be 43.4 in women. Tasdemir et al.^[11] reported the mean preoperative state anxiety score of female patients to be 48. We found that the median value for the State Anxiety-I scores checked on the day before the operation was 48, and the median value for the trait anxiety score was 44 for all patients. This value is consistent with the results reported in other studies.^[2,9,11,20]

Several studies in the literature have shown the relationship between gender and preoperative anxiety score, and it has been found that women have greater anxiety than men do in the preoperative period.^[20] It is the reason why we included female patients in our study, who are normally thought to have higher anxiety scores than men.

When it comes to the relationship between age and preoperative anxiety level is examined, there are different results in the literature. However, some investigators suggested that age does not affect preoperative anxiety levels.^[20,21] Shevde and Panagopoulos,^[22] on the other hand, indicated lower preoperative anxiety levels in patients of advanced age. It was found in the study conducted by Taşdemir et al.^[11] that the preoperative anxiety scores of the elderly group were lower than those of the young and middle-aged groups, although the difference between the age groups was not statistically significant. Demir et al.^[2] found the anxiety level of the young patient group aged between 31 and 40 years of age to be higher compared to the other age groups; however, the difference was not statistically significant. Nevertheless, no significant relationship was found between age groups and anxiety scores or VAS scores in our study. However, although the differ-

ence was not statistically significant, the State Anxiety-I, trait anxiety, and VAS scores in the 35–50 age group were higher than those in the other age groups.

While some studies have reported that the greater the education level, the higher the anxiety becomes,^[2,20] other have demonstrated that education does not affect the degree of anxiety.^[11,22] A study reported that preoperative anxiety levels were higher in individuals who received more than 12 years of education.^[9] Domar et al.^[20] reported that although patients with higher education levels tended to report higher anxiety scores, their pulse rates measured at induction were significantly lower. On the other hand, we did not find any significant relationship between education level, anxiety scores, and VAS scores. Since the unknown factor will be less effective in educated patients, it can be expected that such patients will have lower anxiety. However, it should be taken into account that having detailed information on a subject may increase anxiety.

Furthermore, considering the effect of occupation on preoperative anxiety, studies did not find any correlation between occupation and anxiety.^[20,22] It was noted in Demir et al.^[2] that, although there was no significant difference, the frequency of anxiety was higher in the group of workers compared to other occupational groups. In the study by Tasdemir et al.,^[11] however, the highest anxiety score was in the housewife group and the lowest anxiety score was in the civil servant group, but the difference between the groups were not statistically significant. In our study, although the differences was not statistically significant, the occupation group that had the highest level of anxiety was housewives and workers, and this result is consistent with two other studies conducted in Türkiye (Table 1).

There are studies showing that previous anesthesia experience is an important variable that has an impact on preoperative anxiety. In a study, anxiety levels were found to be high in patients who did not have a history of surgery.^[23] On the contrary, in another study it was shown that women who had previous anesthesia and surgery histories had higher preoperative anxiety levels than women who had no previous exposure to anesthesia or surgery.^[24] Some studies have suggested that anesthesia experience does not change the level of anxiety.^[11,20] In our study, the anxiety levels of patients who had not received anesthesia before were found to be higher, but the difference was not statistically significant (Table 1).

The limitations of the study are the first point is detailed information. GroupP patients may not have been informed standardly since they were given verbal information during detailed information. Sometimes the information was shaped by the patients' questions. The second point is the timing of diazepam. It was planned to be given 45–60 min before being brought from the ward to the operating room, but the ward nurses may not have acted standardly in this regard.

In a systematic analysis that reviewed the documents related to preoperative anxiety published between 2001 and

2021, the studies about preoperative anxiety have made a huge leap forward since 2016. Interventions for preoperative anxiety, premedication, education, and briefing were the main topics of this research.^[25] But as we mentioned before, there are not many studies in the literature comparing the effects of psychological premedication and pharmacological premedication in reducing anxiety.

In conclusion, we decided that using the time allocated for an interview with patients and providing patients with appropriate information were as effective as premedication with drugs in reducing preoperative anxiety. It is known that the time spent on patient interviews is decreasing day by day. Considering the fact that the number of studies comparing preoperative briefing and premedication practices with drugs is low, we have emphasized the importance of face-to-face interviews with patients and briefing patients in today's conditions, where time management is very important.

Ethics Committee Approval

This study approved by the Dokuz Eylul University Faculty of Medicine Ethics Committee (Date: 27.12.2012, Decision No: 2012/43-01).

Informed Consent

Retrospective study.

Peer-review

Externally peer-reviewed.

Authorship Contributions

Concept: S.Ş.T., E.G., T.A.; Design: S.Ş.T., E.G., T.A., V.H., H.E.; Supervision: S.Ş.T., E.Ş., V.H.; Fundings: S.Ş.T., E.Ş.; Materials: S.Ş.T.; Data: S.Ş.T., E.G., T.A., H.E.; Analysis: S.Ş.T., H.E., V.H.; Literature search: S.Ş.T., V.H., E.Ş.; Writing: S.Ş.T., E.G.; Critical revision: S.Ş.T., E.G., V.H.

Conflict of Interest

None declared.

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Psikolojik ve Farmakolojik Premedikasyonun Elektif Operasyon Planlanan Hastalarda Preoperatif Anksiyete Düzeyi Ölçülerek Karşılaştırılması

Amaç: Anestezi hekiminin yaptığı özel bilgilendirme ile oral diazepam premedikasyonunun, elektif cerrahi hastalarında anksiyete düzeyine etkisini karşılaştırmaktır.

Gereç ve Yöntem: Üniversite hastanesi, kadın hastalıkları ve doğum servisinde operasyonu planlanan, 20–65 yaşlarındaki, ASA-II, 90 hasta çalışmaya alındı. Operasyondan bir gün önce tüm hastaların STAI anketi ile anksiyete düzeyleri ölçüldü. Hastalar üç gruba ayrıldı. Anket uygulamasından sonra bir grup hastaya (GrupP), anestezi uygulamasında bulunacak anestezi hekimi tarafından ayrıntılı özel bilgilendirme yapıldı. Bir grup hastaya (GrupPh) ameliyathaneye gelmelerinden önce oral diazepam verildi. Kontrol grubu (GrupC) hastalarına anket uygulamasından sonra sadece rutin preoperatif ziyaret yapıldı. Ameliyathaneye getirildikten sonra tüm hastalara tekrar STAI anketi uygulandı.

Bulgular: Üç grubun tüm hastalarının operasyondan bir gün önce ölçülen durumluk anksiyete medyan değeri 48 (23-70), süreklilik anksiyete medyan değeri 44 (31-67), VAS medyan değeri 50 (0-100) olarak saptandı. GrupP hastalarının bilgilendirmeden sonraki anksiyete skorları anlamlı olarak daha düşüktü ($p<0.001$). GrupPh hastalarının Diazepam verildikten sonraki anksiyete skorunun anlamlı olarak daha düşük olduğu görüldü ($p<0.001$). Operasyon günü ameliyattan hemen önce ölçülen anksiyete skoru, GrupP ve GrupPh hastalarında GrupC hastalarına göre anlamlı olarak daha düşüktü (sırasıyla, $p=0.023$, $p=0.007$). GrupP ve GrupPh hastalarının anksiyete skorları arasında anlamlı bir fark saptanmadı ($p=0.750$).

Sonuç: Preoperatif anksiyeteyi azaltmada hastalara ayrılan sürenin efektif olarak kullanılmasının ve anestezi uygulayacak hekim tarafından yapılan bilgilendirmenin, ilaçla yapılan premedikasyon kadar etkili olduğu gösterildi.

Anahtar Sözcükler: Preoperatif anksiyete; premedikasyon; STAI.